Air Cargo Industry Supply Issues

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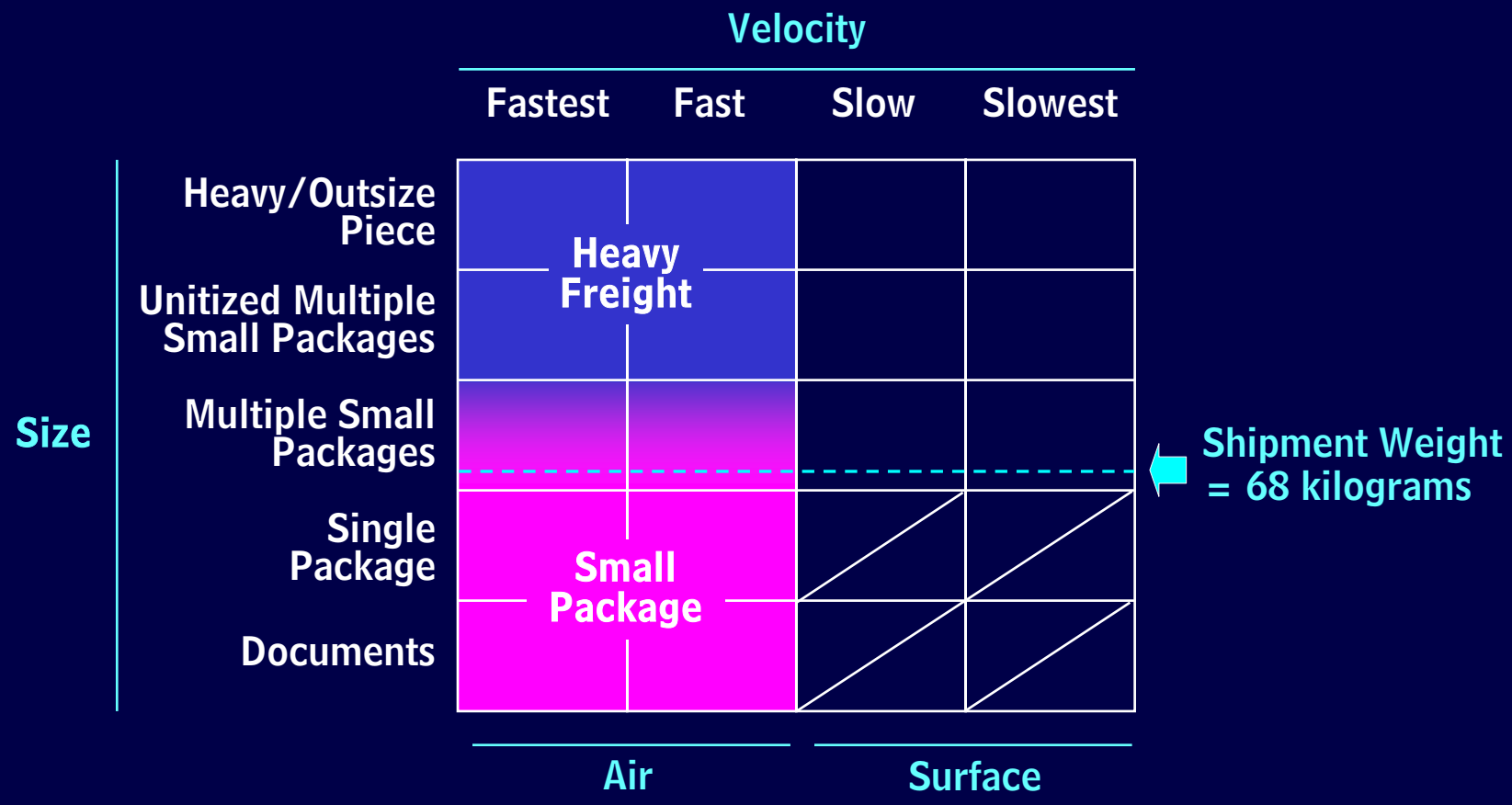
Agenda

- Key Terms & Concepts
- Global Demand Forecast
- Supply Outlook
- Conclusions

Key Terms & Concepts

Air cargo consists of small packages and heavy freight.

Air Cargo Demand Segmentation

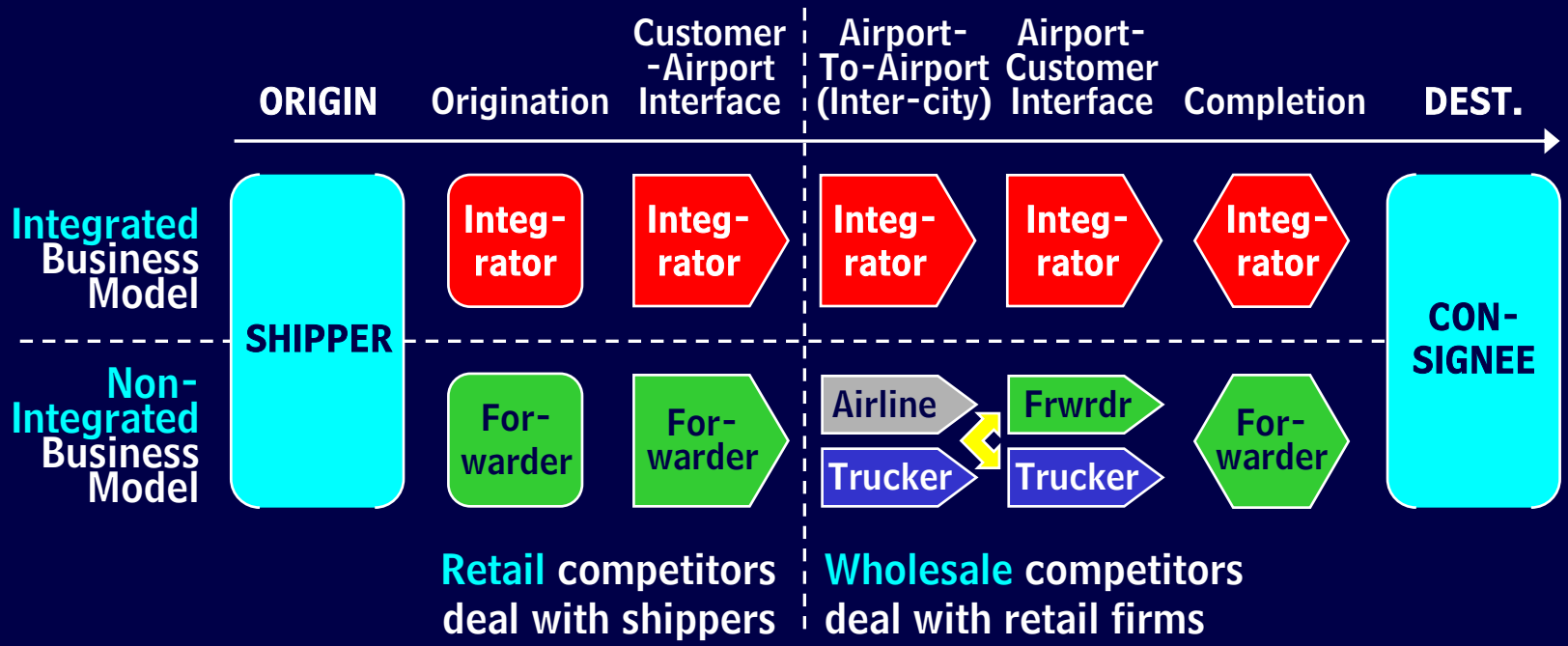


Note: "Unitized" means loaded on a pallets or in a container.

Source: MergeGlobal, Inc.

The main players are integrated carriers, freight forwarders and carriers (both airlines and truckers).

Air Cargo Industry Structure
Typical Shipment's Journey From Door-To-Door



Forwarders handle more than 80% of intercontinental air freight tons!

Note: Intercity truck carriers operate primarily within North America and Europe.

Source: MergeGlobal, Inc.

Demand Forecast

Air cargo is the most expensive way to transport goods.

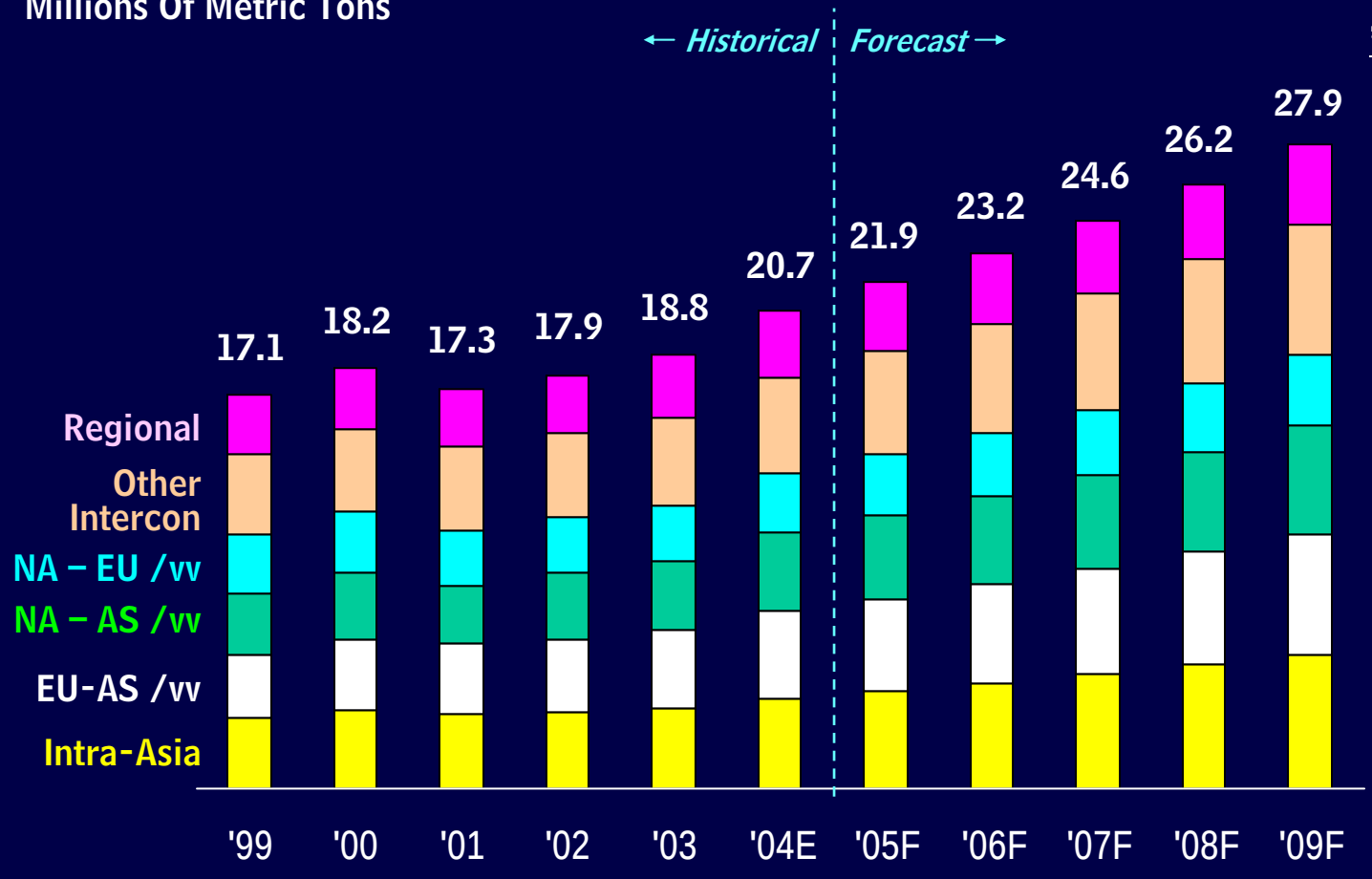
Why Pay More?

- Air cargo rates are 7-10 times the price of surface transport (sometimes even higher!)
- Shippers pay the premium in order to receive:
  - Speed
  - Security
  - Reliability (on-time delivery)
- Most air-oriented commodities are:
  - High value
  - Highly perishable
    - Physical
    - Economic
  - Theft-endangered

MGI, like most other analysts, expects air freight to be a volume growth business for the foreseeable future.

World International Air Freight: 1999-2009

Millions Of Metric Tons



CAGRs	'99-'04	'04-'09
Regional	4.8%	6.1%
Other Intercon	2.0%	3.7%
NA – EU /vv	3.9%	6.2%
NA – AS /vv	-0.2%	3.9%
EU-AS /vv	5.6%	6.4%
Intra-Asia	6.2%	6.8%
	5.3%	8.2%

CAGR – Compound Average Growth Rate; E – Estimated; F - Forecast

Source: MergeGlobal, Inc.

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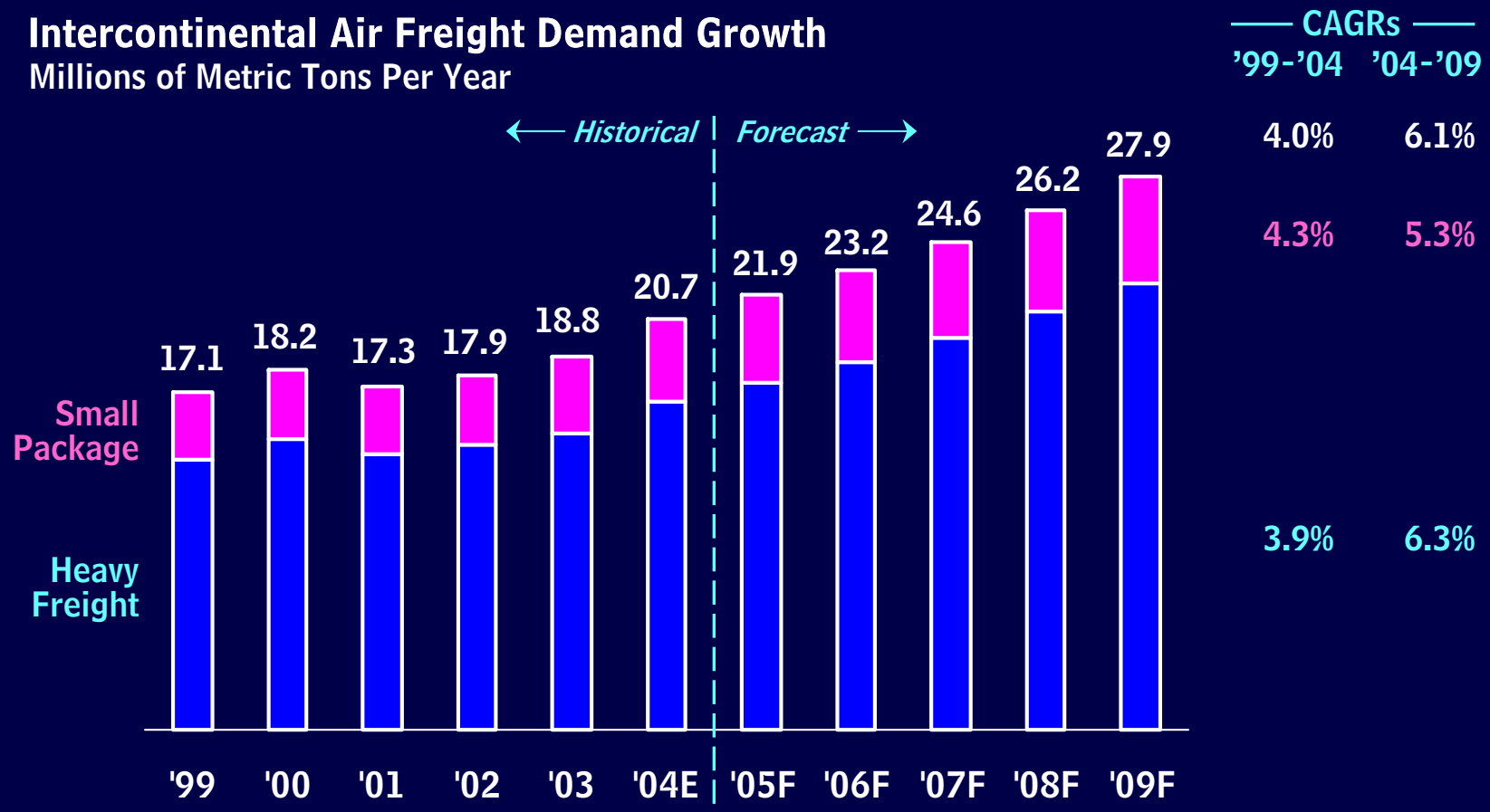
Small-package traffic continues to grow faster than the overall market – but still accounts for only 11% of tons.



CAGR – Compound Average Growth Rate.

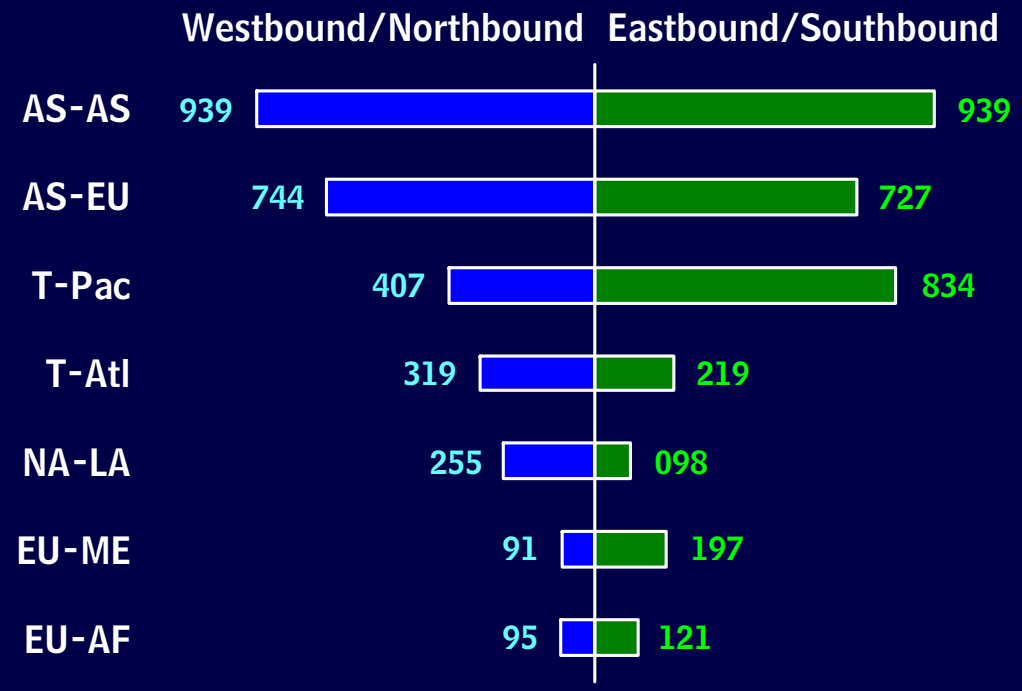
E – Estimated
F - Forecast

Source: MergeGlobal, Inc.

Asia dominates the fastest-growing air freight markets.

- New Traffic represents the growth in annual tonnage between 2004 and 2009.
- Not surprising that the majority of new traffic is concentrated in Asian trade lanes.
- Absolute growth numbers reflect existing directional imbalances.

Fastest-Growing Intercon Markets: 2004-2009
New Traffic In Thousands Of Metric Tons Per Year



Source: MergeGlobal, Inc.

Of course, there are significant risks to the forecast.

- **Macroeconomic Risks**
  - Terrorism/war-related "shocks"
  - Overdependence on U.S., especially indebted U.S. consumers, to drive global economic growth
  - Significant further depreciation of the US dollar against Asian and European currencies would diminish U.S. appetite for imports!
  - Backlash against outsourcing and loss of employment opportunities at home
- **Air Freight Specific Risks**
  - Impact of evolving aviation security rules
  - Impact of technological trends (miniaturization, gadget integration) on future air freight demand?
  - Continuous relocation of manufacturing activity to low-cost centers (currently to China, in the future to ?)
  - Viable "middle market" transport mode

Source: MergeGlobal, Inc.

Supply Outlook

Cargo airlift is generated by three types of aircraft: passenger, "combi" and freighter.

Boeing 747 Examples

Belly

≈ 8-12 Metric Tons
(Depending On Flight Distance and Passenger Load)

B747-400 Pax

Combi

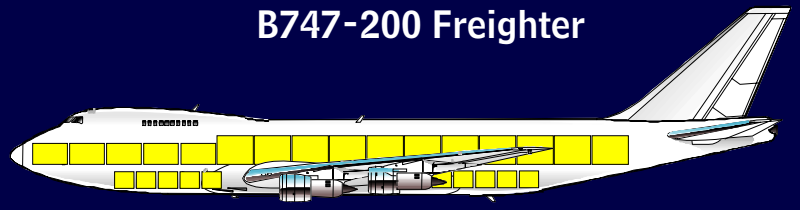
≈ 25-35 Metric Tons

B747-400 Combi

Freighter

≈ 100 Metric Tons
(Depending On Freight Density)

B747-200 Freighter

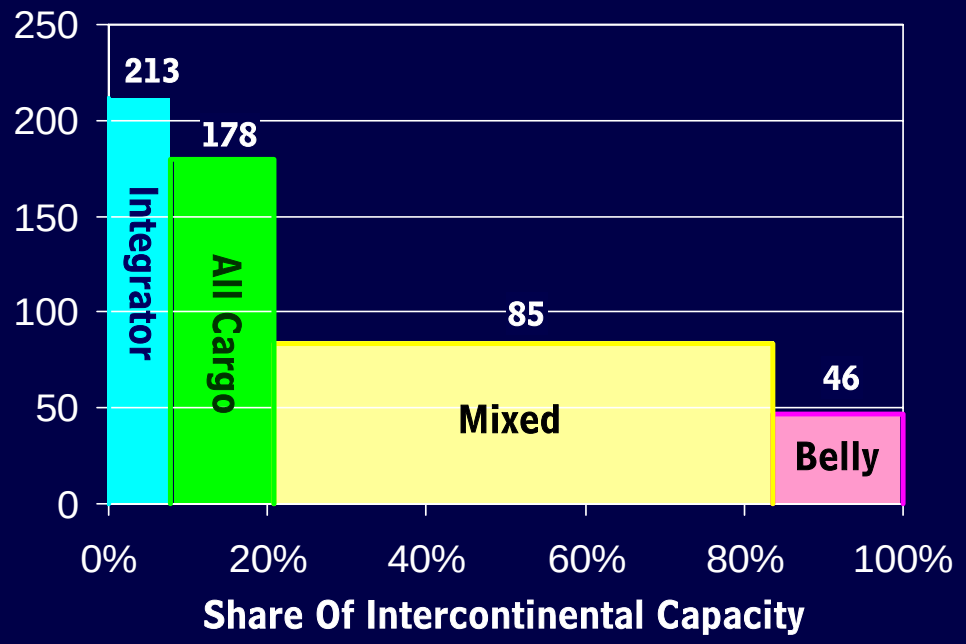


Source: MergeGlobal, Inc.

Belly lift on passenger jets is by far the lowest-cost form of cargo capacity.

- Belly lift accounts for approximately 50% of global intercon capacity.
- However, pure-belly carriers – which operate no main-deck capacity of any type – account for less than 20% of the global total.
- The majority of intercontinental lift is generated by mixed-fleet carriers.
- Through alliances, leading mixed-fleet carriers are gaining commercial control of more pure-belly carrier lift.

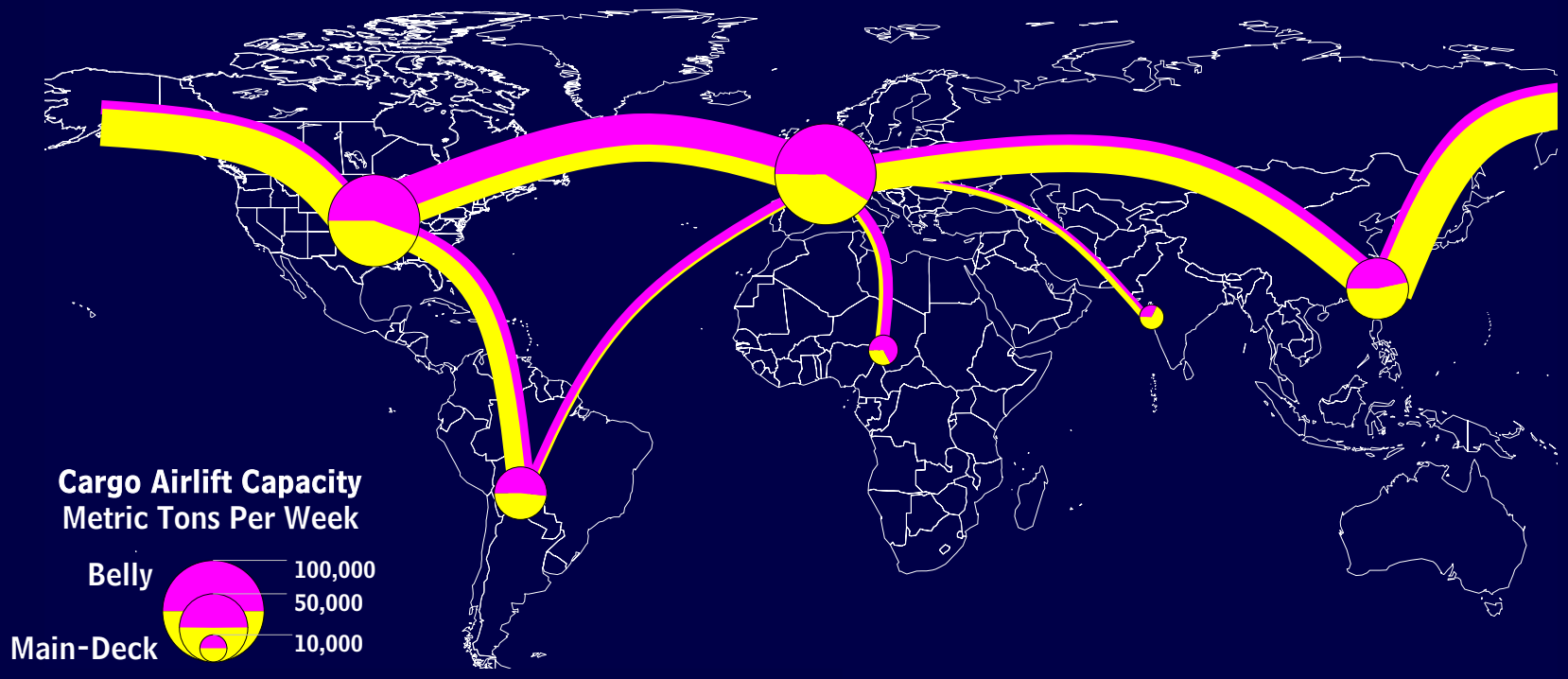
Relative Intercontinental Unit Cost: 2003
Index (Average = 100)



Source: MergeGlobal, Inc. from U.S. DOT, IATA, ICAO and company reports.

Belly intensity varies widely by market – from more than 70% in the North Atlantic, to less than 30% in the North Pacific.

Airlift Capacity* In Major Markets: 2004



* Capacity adjusted to reflect volumetric limits, range/payload penalties and pax baggage loads.

Source: MergeGlobal, Inc.

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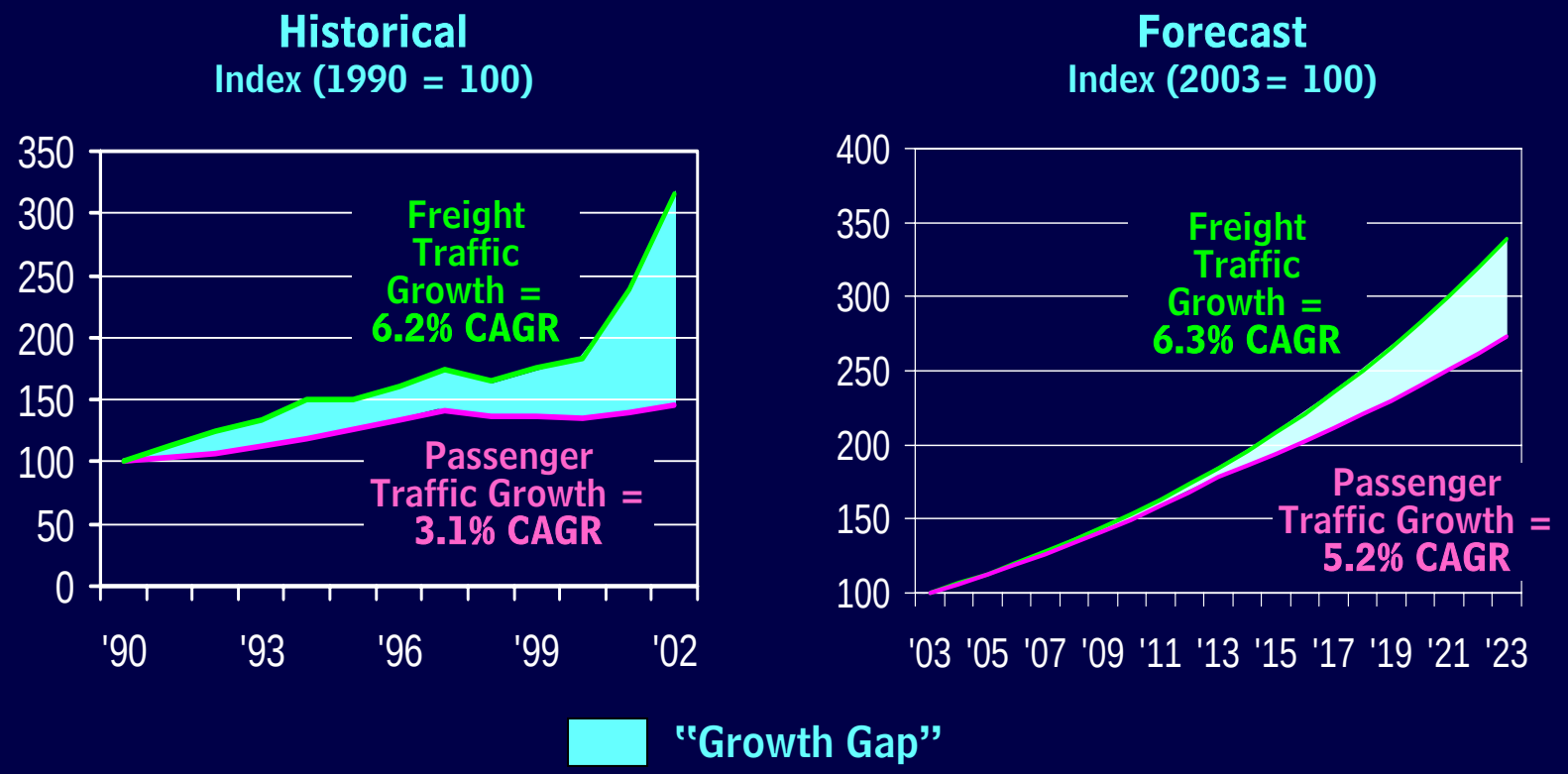
Cargo demand is growing faster than passenger traffic. More freighters will be required to handle the demand.

Intercontinental Passenger/Cargo "Growth Gap"



Note: Freight traffic index based on freight tonne-kilometers (FTKs); Passenger traffic index based on revenue passenger-kilometers (RPKs).

Source: MergeGlobal, Inc. from IATA historical data and Boeing forecasts (contained in Commercial Market Outlook and World Air Cargo Forecast)

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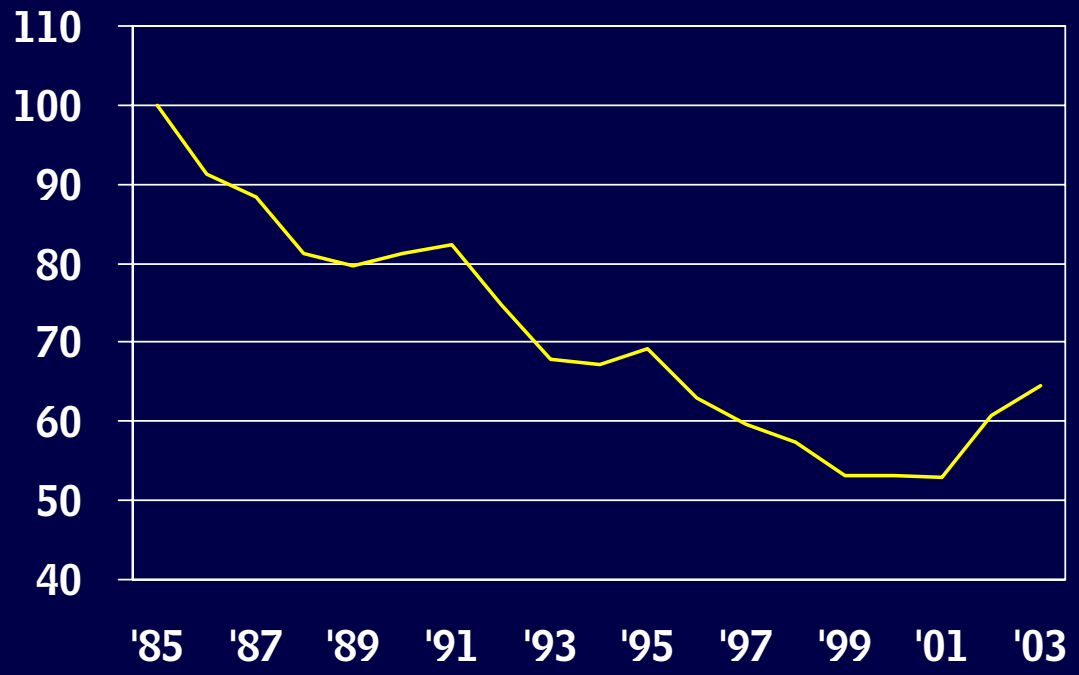
Air freight yields have improved since 2001 – but still are in long-term decline.

- **Structural decline in yields due to:**
  - Growth of containerized belly capacity
  - Reduced regulatory price controls
  - Longer lengths of haul (rise of Asia as the world's manufacturing center)

International Air Freight Yields
USD per FTK (Index: 1985 = 100)



Source: Boeing World Air Cargo Forecast

The implication is that freighter operators will continue to upgauge aircraft size in order to minimize unit costs.

World Freighter Fleet: March 2005

	NA	EU	AS	ROW	Total
Intercontinental					
B747-400	15	24	70	4	111
B747 Classic	80	26	45	25	176
MD-11	64	21	20	6	111
DC-10-30	42	0	0	17	59
Subtotal	199	70	129	52	450
Regional					
DC-10-10	62	0	0	1	63
A300-600	86	8	6	2	102
Other Widebody	155	82	9	26	272
Narrowbody	689	356	92	286	1,423
Subtotal	992	446	107	315	1,860
TOTAL FREIGHTER FLEET	1,191	516	236	367	2,310

Source: MergeGlobal, Inc. from Airclaims CASE database.

Conclusions

Conclusions

- **Freighters will account for a rising share of total airlift**
  - Freighter fleet will grow even faster than air freight demand, which will grow faster than passenger traffic
  - Possibility that security rules will dramatically shift the balance
- **Industry cost structure will shift inexorably upwards**
  - Most efficient freighter is far more expensive than incrementally-costed and –priced belly lift
- **Freight demand will increasingly drive supply**
  - Unlike "by-product" belly lift, freighter routing and timing decisions will be driven purely by freight demand

Key unknown is when long-term yield decline is reversed

Thank You!